

REMARKS

Reconsideration of this application is requested. Claims 1-36 remain under active consideration subsequent to entry of this amendment.

Applicants are pleased to note the examiner has withdrawn the requirement for restriction.

Three issues are raised in the outstanding Official Action, all related to prior art. The first is rejection of claims 22-30 as allegedly being anticipated by Hayashi et al EP 936 507. Claims 1-19, 31 and 32 have attracted a second anticipation rejection based upon Hayashi et al EP 957 474 while claims 20, 21 and 33-36 have attracted a rejection of lack of patentability over Hayashi et al EP 957 474 in combination with U.S. 5,830,557 also to Hayashi et al. These rejections are traversed for the reasons explained in more detail below.

Claim 22 has been amended in order to point out more particularly and distinctly the subject matter regarded as inventive and to comport with the description of the invention in the specification. Basis for these changes to claim 22 are explained in the comments that follow.

Revised claim 22 is directed to black magnetic acicular composite particles having an average particle diameter of 0.051 to 0.35 μm , and composed of magnetic acicular cobalt-coated iron oxide particles or magnetic acicular metal particles containing iron as a main component as core particles. A coating is formed on surface of the magnetic acicular particles, the coating being at least one organosilicon compound as defined in claim 22. A carbon black coat composed of at least two carbon black layers integrally adhered with each other through an adhesive is formed on the organosilicon compound-containing coating layer. Two carbon black layers are described throughout the specification, including pages 33-34, and the use of an adhesive at page 37, lines 18-20 and page 38. The carbon black coat represents 10 to 40 parts by weight based on 100 parts by weight of the magnetic acicular particles.

The black magnetic acicular composite particles of this invention exhibit not only an excellent dispersibility in vehicle due to a reduced amount of carbon black desorbed or fallen-off from the particle surfaces but also a more excellent blackness, a lower volume resistivity value and a well-controlled myristic acid-adsorption.

In particular, the black magnetic acicular composite particles in which carbon black is firmly formed and adhered onto the surfaces of the core particles, exhibit a well-controlled myristic acid-adsorption of 0.01 to 0.3 mg/m² as described in the last paragraph of page 27 of the specification. The procedure for assessing myristic acid adsorption is summarized in item (12) on pages 90-91 of the specification.

The reason why the magnetic acicular composite particles of this invention exhibit a reduced myristic acid-adsorption, is considered to be that many hydroxyl groups present on the surface of the core particles are prevented from being bonded with carboxyl groups of myristic acid which show a high affinity to the hydroxyl groups, by the synergistic effect of the dense carbon black coat formed on the surfaces of the core particles which has an adequate thickness, and an adhesive.

Item 2 of the Official Action is a rejection directed towards claims 22-30 only. European Patent 0936507 discloses black magnetic composite particles for a black magnetic toner composed of magnetic iron oxide particles having an average particle diameter of 0.055 to 0.95 μm , a coating formed on surface of the magnetic iron oxide particles containing at least one organosilicon compound obtained by drying or heat-treating an alkoxysilane compound, a polysiloxane or modified polysiloxane, or a fluoroalkyl organosilane compound obtained by drying or heat-treating a fluoroalkylsilane compound.

Carbon black fine particles having a particle size of 0.002 to 0.05 μm , are adhered on at least a part of the coating. The amount of the carbon black fine particles adhered is 1 to 25 parts by weight based on 100 parts by weight of the magnetic iron oxide particles.

European Patent 0936507 also describes a process for producing black magnetic composite particles by (a) mixing and stirring magnetic iron oxide particles of specified

particle diameter together with appropriate silicone-containing compound using an edge runner, thereby coating the surfaces of the magnetic iron oxide particles with the silicone-containing compound, (b) adding carbon black fine particles having an average particle size of 0.005 to 0.05 μm in an amount of 1 to 25 parts by weight based on 100 parts by weight of the magnetic iron oxide particles, to provide mixed particles, then (c) mixing and stirring the mixed particles using an edge runner, followed by (d) drying or heat-treating.

As will be apparent from the above, in the black magnetic composite particles of European Patent 0936507, the carbon black fine particles are adhered on the organosilicon compound coating layer without using an adhesive. That is, in European Patent 0936507, there is neither disclosure nor suggestion of a carbon black coat of at least two carbon black layers integrally adhered with each other through an adhesive, formed on an organosilicon compound coating layer as employed in the present invention as defined in claims 22 to 30.

In addition, since there is no suggestion nor motivation in European Patent 0936507 relating the use of at least two carbon black layers integrally adhered with each other through an adhesive, one of ordinary skill in the art would not expect the black magnetic acicular composite particles as defined in claims 22 to 30, exhibiting a lower volume resistivity value and a well-controlled myristic acid-adsorption characteristic of the present invention from the description of European Patent 0913431.

For the above reasons it is apparent that claims 22-30, as above amended, are neither described in nor suggested by the applied reference. Reconsideration and withdrawal of the rejection is requested.

The balance of the Official Action, items 3 and 4, relate to rejections based upon EP 957474 which has a publication date of November 17, 1999. However, applicants claim benefit of two prior Japanese applications. Submitted herewith are English translations of Japanese Patent Application No. 11-324150 filed November 15, 1999 and No. 11-326191 filed November 16, 1999.

HAYASHI et al
Serial No. **09/710,834**
April 24, 2003


Applicants' claim for benefit of priority under 35 U.S.C. §119 is prior to the publication date of European Patent 0957474. Therefore, European Patent 0957474 is not available as prior art against any of the claims of this application and the rejections in items 3 and 4 of the Action must be withdrawn.

Reconsideration and favorable action are solicited. If for any reason an interview would facilitate further examination and allowance of claims in this application, the examiner is urged to contact the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Arthur R. Crawford
Reg. No. 25,327

ARC:pfc
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100